



iConverter 100Fx/Tx Dual Fiber Modules					
Connector Type	Distances	ST	SC	MT-RJ	LC
MM	5 km	8360-0	8362-0	8364-0	
SM	30 km	8361-1	8363-1	8365-1	8367-1
SM	60 km	8361-2	8363-2		8367-2
SM	120 km		8363-3		8367-3
iConverter 100Fx/Tx SF Single-Fiber Modules					
Connector Type	Distances	Tx: 1310 nm, Rx: 1550 nm		Tx: 1550 nm, Rx: 1310 nm	
SM, SC	20 km	8370-1		8371-1	
SM, SC	40 km	8370-2		8371-2	

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3. Attach the UTP port via a category 5 cable to a 100Base-Tx Ethernet device.
4. If using the iConverter 100Fx/Tx, attach the fiber port via an appropriate multimode or single-mode fiber cable to a 100Base-Fx Fast Ethernet device. The iConverter transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.
5. Single fiber (SF) media converter models must be deployed such that the transmission (Tx) and reception (Rx) wavelengths of the single-mode (SM) ports communicating over a fiber must match the reception (Rx) and transmission (Tx) at the opposite end. The Tx wavelength on one end has to match with the Rx wavelength on the other. Additionally, the Tx wavelength must be different at both ends. Note that based on this guideline the same SF media converter model type would never be deployed at both ends of a single-mode fiber since each model transmits and receives at a different wavelength.

LED Indicators:

LED	Color	Description
Pwr:	Yellow	On--Power on
F/O Lk:	Green	On--Link; Blink--Activity Steady Blink--Standby mode
AN:	Green	On--UTP Auto-Neg. enabled
FDx:	Green	On--Full-Duplex mode
UTP/Link:	Green	On--UTP Link; Blink--Activity Steady Blink--Standby mode

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Description:

The iConverter 100Fx/Tx and 100Fx/Tx SF provide half or full-duplex 100 Mbps 100Base-Fx fiber to 100Base-Tx UTP conversion. They support half/full-duplex Auto-Negotiation on the UTP side with manual override and manual setting to the desired duplex mode. Multimode models are available with distances up to 5km. Single-mode models are available with standard 1310nm wavelength with distances from 30 to 60km and with 1550 nm with distances up to 120km. Single-fiber models are available with distances up to 40km.

Front Panel Switch Settings:

Link Segment=	Link Seg	☐ Link Prop=Link Propagate
Normal=	Norm	☐ R/Flt Det =Remote Fault Detection
UTP Auto Negotiate=	AN	☐ Man =UTP Manual
UTP Full Duplex=	FDX	☐ HDX =UTP Half Duplex

Link Seg/Link Prop Switch:

This switch controls Link Propagate (LP, sometimes referred to as LLC - Link Loss Carry Forward) or segment (LS).
When in the "Link Prop" position, LP mode is enabled. In this mode, the iConverter propagates the presence or absence of an incoming "Link" signal from one port to the other. The iConverter will generate an outgoing "Link" signal on its copper side only upon receiving a "Link" signal on its fiber side.
When in the "Link Seg" position (factory setting), LS is enabled. In this mode the iConverter generates its outgoing "Link" signals independently of any incoming "Link" signals. For example, the iConverter will generate an outgoing "Link" signal on its copper side whether the

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fiber "Link" is present or not.

"R/Flt Det" Remote Fault Detection Switch:

When in the "R/Flt Det" position, the Remote Fault Detection (RFD) mode is enabled. In this mode the iConverter 100Fx/Tx and 100Fx/Tx SF media converters propagate the presence or absence of an incoming "Link" signal from a Fiber port receive side to the transmit side of the Fiber port. Additionally, the iConverter 100Fx/Tx media converters propagate the presence or absence of an incoming "Link" signal from the Fiber to UTP port and from the UTP to Fiber port in this mode. When in the "Norm" position (factory setting), RFD is disabled.

iRedundancy Mode:

When LP and RFD are set simultaneously, iRedundancy mode is enabled. In this mode, two adjacent modules will act as a primary and a secondary connection to a remote pair of adjacent modules. The two modules are typically connected, via UTP, to two ports on the same switch. Under normal conditions, the secondary modules will be in standby mode, indicated by a flashing link light. In the event of a media failure along the primary connection, the secondary modules will become active and take over the task of routing data between the two switches. Because each switch must learn a new MAC address to complete the cutover, the use of fast-aging switches is highly recommended.
When the primary fiber link is restored, the link lights on the primary modules will return to active mode, and the secondary modules will return to standby mode, indicated by a flashing link light just as before.

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"AN/Man" UTP Auto/Manual Switch:

When the "Auto-Negotiation/Manual" switch is in "Auto-Negotiation" position (factory setting), the iConverter advertises its setting to the device connected to the UTP port. If the connected device is operating in "Half-Duplex", the iConverter will operate in half duplex. If the connected device is operating "Full-Duplex", the iConverter will operate in full-duplex.

"FDX/HDX" UTP Full/Half Duplex Switch:

When the "Auto/Manual" switch is in "Manual" position, the "FDX/HDX" switch determines the duplex operation mode for the iConverter. When set to "Full Duplex" (factory setting), the iConverter operates in full duplex. When set to "Half Duplex" the iConverter operates in half duplex. It should be noted that Half-duplex must be used when connecting to a hub. Full-duplex can be used when connecting to a switch or between a switch and a full-duplex capable workstation.

"RJ45 Cross-Over" Switch:

When connecting the UTP to a hub or switch, set switch to "Straight-Through" (factory setting). When connecting to a workstation, set it to "Cross-Over."

Mounting and Cable Attachment:

iConverter modules are hot-swappable and can be installed into any chassis in the iConverter family.
1. Carefully slide the iConverter module into the installation slot, aligning the module with the installation guides. NOTE: Ensure that module is firmly seated against the backplane.
2. Secure the module by securing the panel fastener screw (attached to module) to chassis front.

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SPECIFICATIONS	
Model	100Fx/Tx, 100Fx/Tx SF
Protocols	100Base-Fx, 100Base-Tx
Copper Connectors	RJ-45
Fiber Connectors	SC, ST, LC, MT-RJ, Single Fiber SC (100Fx/Tx SF)
Controls	General: LS/LP, RFD, UTP X-over, Auto/Man, FD/HD
LED Displays	Pwr, FO link, UTP link, Auto, FD/HD
Dimensions	W0.85" x D:4.5" x H:2.8"
Weight	8 oz.
Compliance	UL, CE, FCC Class A, NEBS 3
Temperature -Operating -Storage	0 to 50 C -40 to 80 C
Altitude	0-10,000 ft
MTBF (hrs)	1, 234, 568

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Warning

The operating description in this Instruction Manual is for use by qualified personnel only. To avoid electrical shock, do not perform any servicing of this unit other than that contained in the operating instructions, unless you are qualified and certified to do so by Omnitron Systems Technology, Inc.

Warranty

This product is warranted to the original purchaser against defects in material and workmanship for a period of TWO YEARS from the date of shipment. A LIFETIME warranty may be obtained by the original purchaser by REGISTERING this product with Omnitron within 90 days from the date of shipment. TO REGISTER, COMPLETE AND MAIL OR FAX THE REGISTRATION PORTION OF THIS INSTRUCTION MANUAL TO THE INDICATED ADDRESS. Or you may register your product on the Internet at <http://www.omnitron-systems.com>. During the warranty period, Omnitron will, at its option, repair or replace a product which is proven to be defective.

For warranty service, the product must be sent to an Omnitron designated facility, at Buyer's expense. Omnitron will pay the shipping charge to return the product to Buyer's designated US address using Omnitron's standard shipping method.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from improper or inadequate use and/or

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maintenance of the equipment by Buyer, Buyer-supplied equipment, Buyer-supplied interfacing, unauthorized modifications or tampering with equipment (including removal of equipment cover by personnel not specifically authorized and certified by Omnitron), or misuse, or operating outside the environmental specification of the product (including but not limited to voltage, ambient temperature, radiation, unusual dust, etc.), or improper site preparation or maintenance.

No other warranty is expressed or implied. Omnitron specifically disclaims the implied warranties of merchantability and fitness for any particular purpose.

Exclusive Remedies

The remedies provided herein are the Buyer's sole and exclusive remedies. Omnitron shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any legal theory.

Technical Support:

For help with this product, contact our Tech. Support:
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